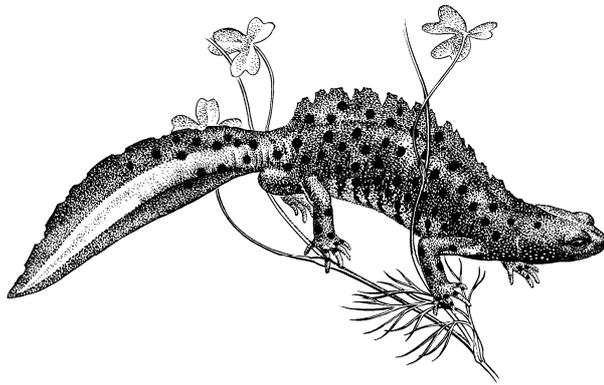


Species Action Plan for Sussex



Great Crested Newt

Triturus cristatus

I. Introduction/ Current Status

Identification

The great crested newt *Triturus cristatus* is by far the most impressive of the three species of newt found in the UK. Its name comes from the large serrated crest running along the male's back and another running along its tail. A smaller, but continuous, wavy crest is also found on the smooth newt, leading to frequent mis-identification. The crests are most obvious in the spring, when the adults are in their breeding ponds. In the male great crested newt, there is a brilliant white to electric blue flash along the edge of the tail. The great crested newt has a virtually black body, granular skin and an orange belly with irregular black blotches. The male smooth newt has markings, which superficially look similar to the great crested newt, as it has a yellow/orange and black belly. However, these marks are generally more circular and the adults tend to have fewer spots.

Size is also a key identification feature. Most adult great crested newts reach up to 15 cms in length while their smaller cousins, the smooth newts, barely grow to 10 cms. However, there is another factor, which distinguishes it from the other two species of newt and is one of the reasons it has undergone a significant decline in recent years. The larvae of great crested newts favour open water, where they hunt for tadpoles and small aquatic invertebrates. Unfortunately, this habit makes them easy prey for predators, particularly fish, and the losses can be catastrophic. Great crested newts and fish are so incompatible that even the introduction of stickleback can be enough to wipe out a population. (See Appendix 4: Identification of great crested, smooth and palmate newts)

Ecology

Like all amphibians, newts need suitable habitat in the surrounding countryside to sustain them while they are away from their breeding ponds (which can be between July and January). Newts also regularly move between ponds and their terrestrial habitat to forage or disperse throughout the spring and summer. This emphasises the importance of having suitable terrestrial habitat all year round.

Hunting in areas of long grass, hedgerows and other semi-natural habitats, seeking out earthworms and other invertebrates, adult and juvenile great crested newts will forage randomly, before finding protection

from the excesses of winter down a mammal burrow or under a pile of logs or rocks. However, some adults over-winter at the bottom of ponds in the sediment and debris. There is great variation in the amount of time an adult newt may actually spend in the water. It can be as little as a few days or even one day.

Migration is presumed to be along wildlife corridors such as hedgerows and watercourses, where the newt is less vulnerable to predation. The loss of these features results in the fragmentation of populations, as they are unable to move as freely.

To make matters worse, as our understanding of great crested newt ecology increases, it is becoming clear that in some areas the newt population may rely on a cluster of ponds to sustain itself. Metapopulations occur when newts from a larger area of countryside all compose part of the same overall population. Some ponds act as important breeding sites producing large numbers of animals, whilst others act as 'sinks' with very little breeding success. However, as these ponds change over time, so do the dynamics in the newt population. This suggests that isolated breeding ponds may be very fragile and newts using them vulnerable to extinction as natural succession occurs. (See Appendix 5: The newt year)

Distribution

The great crested newt occurs in at least 23 countries, with significant strongholds in the UK, France, Germany, Poland and Sweden. However, it is declining rapidly across this range and is now recognised as threatened in 11 of these countries. It is this widespread decline, together with the fact that the UK holds a significant proportion of the world population, which has resulted in such importance being attached to its conservation in the UK.

Unfortunately, it is not one of the most charismatic of species; nor is it particularly obvious and this, combined with the lack of amphibian ecologists, has resulted in a relatively poor understanding of its distribution. The situation is the same in both East and West Sussex.

A recent survey, using volunteers to assess the distribution of the species in Southern England, found that the species was present in 14% of randomly selected 1km squares. This figure increased to 32% where surveys were carried out in squares with historical records. The database, held by the Sussex Amphibian and Reptile Group and the Sussex Biodiversity Record Centre, contains records from 250 sites, many of which are focussed around areas with significant recording effort. From these results, Sussex appears to have an internationally significant resource of this species, even though the majority of sites have yet to be identified. (See Appendix 2: Map showing great crested newt records in Sussex)

The distribution is by no means uniform across East and West Sussex. The greatest concentration of breeding ponds appears to be in the middle of Sussex, with Lewes and Wealden Districts having the largest number, followed by Mid-Sussex and Horsham Districts. Populations have also been identified within the conurbations along the south coast, some of which may prove to be smooth newts in garden ponds with further survey work. However, areas of the Downs around Brighton, Eastbourne, Newhaven and Seaford are known to support viable populations.

Probably the most significant site known in Sussex is in the Tide Mills Site of Nature Conservation Importance (SNCI) at Newhaven. Recent work in this area has revealed a metapopulation containing thousands of animals in a cluster of old and recently created ponds. The Ashdown Forest is also an area with an apparently high population, probably due to its extensive semi-natural habitats. For this reason Ashdown Forest, which is already designated as a Site of Special Scientific Interest (SSSI) and a Special Protection Area (SPA), has now been proposed as a Special Area of Conservation (SAC), with the great crested newt population being cited as one of the features of interest.

There are, however, some parts of Sussex that do not appear to contain such large numbers of great crested newt sites. The Coastal Plain west of Worthing and the whole of Chichester District appear to be almost totally devoid of populations. The intensive agricultural landscape of the Coastal Plain and the lack of large numbers of suitable ponds are thought to be the main reasons for this. There is also a low density of records at the eastern end of Sussex in Rother District. However, this may be due to lack of recording effort rather than lack of sites, as the density of ponds in the High Weald is high and the landscape is generally considered to be very suitable for the species.

Understanding the distribution of the species is one of the first priorities for conservation work and this is reflected in the plan. Not only will this enable sites to be protected, it will allow trends in the population to be monitored over time and the success of conservation work to be measured.

Status

The great crested newt is one of the most protected species in Britain. This legal protection results from its inclusion in the EC Habitats and Species Directive 1992, as well as the Wildlife and Countryside Act 1981. It is also a priority species in the UK Biodiversity Steering Group Report, as well as being included under the Berne Convention. The legislation not only protects the newt against killing, injuring or sale, but also prohibits disturbance (including handling) and damage to its habitats (terrestrial and aquatic).

2. Current factors causing loss or decline

All studies carried out on great crested newts in recent years have shown that the species is undergoing decline across its range in the UK, as well as Europe. The reasons for this decline include the following.

The loss and damage to breeding ponds caused by:

Infilling of field ponds due to their declining importance in the agricultural landscape.

Infilling of ponds as a result of site development.

Introduction of fish / waterfowl into ponds, either deliberately or accidentally.

Illegal introduction of terrapins and turtles

Spread of invasive aquatic plants that make ponds unsuitable for amphibians.

Pollution (particularly eutrophication) due to agricultural intensification.

Land drainage and irrigation activities affecting ground water levels.

Natural succession, which results in the loss of breeding ponds if they are not managed or replaced.

The loss and damage to terrestrial habitats used for foraging and hibernation, due to:

Development of green and brown field sites.

Agricultural intensification, causing loss of pasture, woodlands and hedgerows.

Inappropriate management, such as over grazing while newts are using pasture.

Fragmentation of habitats due to loss or truncation of linear features, or the construction of barriers to movement (e.g. roads).

Gulley pots and drains may trap migrating amphibians

Increased use of pesticides may also be having a significant effect on populations.

The loss of a great crested newt population is usually the result of the combination of a number of these factors. It may also be the case that the gradual degradation and fragmentation of the habitat over a number of years (which is currently going on at many sites) has made the metapopulation smaller and consequently less viable, and therefore more vulnerable to a single damaging event.

3. National Species Action Plan

At a national level, there is a Great Crested Newt Species Action Plan Steering Group (GCN SAP SG), which is made up of the lead partners: The Herpetological Conservation Trust (HCT) (Secretariat), Froglife and The British Herpetological Society (BHS) and the contact point, English Nature (EN). There are also representatives from the Environment Agency (EA), the Countryside Council for Wales (CCW), Scottish Natural Heritage (SNH), The Joint Nature Conservation Committee (JNCC), the Scottish Environmental Protection Agency (SEPA), the Wildlife Trusts, the PondLife Project and the Herpetofauna Groups of Britain and Ireland (HGBI) (See Appendix 1 for contact details).

The implementation of the National Great Crested Newt (GCN) SAP has been initiated through the production of a Work Programme 1998 – 2002 (currently undergoing revision).

Work in the early 1980s documented a 2% decline in the number of ponds every five years. A more recent report suggests that 42% of great crested newt populations in the London area have been lost in 20 years. Assuming a 0.4 - 2% annual loss of ponds and assuming 18,000 populations, then between 72-360 populations are being lost each year. A target of 100 re-colonisations, new ponds or pond complexes, suitable for supporting breeding populations of great crested newt, will offset these losses. These new ponds represent the number required to offset losses due to neglect and should be in addition to replacement ponds associated with mitigation of site loss through development.

As a result the National SAP for the species has the following three targets:

- A target of 100 re-colonisations will offset these losses
- Where feasible, restore populations to 100 unoccupied sites each year for the next five years (as of 1998), creating new ponds and managing habitat where necessary.
- Maintain the range, distribution and viability of existing great crested newt populations.

The National GCN SAP Work Programme details the proportion of these 100 new populations for the UK that each administrative area is responsible for restoring, based on current distribution data, rate of pond loss and other pressures. This has resulted in the counties of East and West Sussex being allocated 15 re-colonisations each (30 in total), per year.

4. Current Action

National

Work is being undertaken across the country for this species and, in addition to extensive guidance being produced, a national Great Crested Newt Conservation Officer has been employed to co-ordinate action.

In 2002 an Environment Agency Research & Development project was piloted in Sussex, Kent, Hampshire and Glamorgan to develop a methodology to monitor the status of the species nationally. This resulted in large numbers of volunteers being trained and supervised by Froglife to carry out detailed surveys of randomly selected squares.

Sussex

The Sussex Amphibian and Reptile Group (SARG) has been collating records of great crested newts since 1986, and in 2000 produced a detailed report containing these records and recommendations for action to conserve the species

The Sussex Biodiversity Record Centre (SxBRC) is also carrying out work with volunteers to resurvey historic records and to build up an inventory of sites, which can be distributed to Local Authorities and other Statutory Agencies.

The Romney Marsh Countryside Project (RMCP) has surveyed almost all of the ponds on Walland Marsh (part of which is in East Sussex) and are trying to link up populations by excavating strategically placed new(t) ponds.

The British Trust for Conservation Volunteers (BTCV) / Southern Water Pond Warden Scheme is also assisting with the identification of sites. Southern Water also carried out a widespread survey of populations near their landholdings in 2003.

Since the discovery of great crested newts on the *RSPB*'s Pulborough Brooks Reserve in 2001, a series of new ponds have been constructed and successfully colonised.

The Environment Agency (EA) ensures that all applications for stocking of fish are screened against records for great crested newt and determined accordingly.

The Ouse Estuary Project has made a major contribution to the conservation of great crested newts. East Sussex County Council acquired 40 hectares of the levels south of the A259, between Newhaven and Seaford, to provide flood storage, habitat compensation and mitigation for an adjacent development. The conservation of the great crested newt population was extremely successful. A trapping programme revealed a much greater population than was anticipated and measures to ensure their future well being included the construction of new breeding ponds and artificial hibernation areas. The area is SNCI and will become a Local Nature Reserve when works are completed. Work was funded by the East Sussex County Council, the South East England Development Agency (through the Newhaven Economic Partnership) and INTERREG II.

(See section 11, Consultation, for contact details of organisations mentioned above)

Legislation

All applications for fish stocking are now screened against a database of known sites to ensure that no further populations are lost this way.

A recent review of the licensing procedures under The Conservation (Natural Habitats, &c.) Regulations 1994, now requires any loss of habitat for development and the associated movement of animals to be licensed by The Secretary of State for the Environment.

To obtain this licence the applicant must demonstrate that:

- There are imperative reasons of overriding public interest.
- There is no satisfactory alternative.
- The action will not be detrimental to the maintenance of the population at a favourable conservation status in their natural range.

5. Objectives

The three targets of the National Action Plan, to deliver the objective of stabilising the population, are outlined in section 3.

Sussex Objectives for the great crested newt:

1. The establishment of new populations by creating ponds
2. Ensure that the accurate distribution of the species is ascertained and monitored
3. Ensure that as many breeding sites as possible and associated terrestrial habitats are identified and protected.

In order to achieve this protection it is essential that landowners are made aware of:

- The presence of the species
- The measures that can be taken to ensure their survival
- Grants that are available locally and nationally.

It is also fundamental that development control organisations have access to detailed distribution data to ensure that:

- No further losses occur
- In the longer term, measures are taken to restore the links between fragmented habitats and breeding sites.

6. Targets

This Species Action Plan has now been archived

7. Potential

(See Appendix 3: Summary of ideal habitat requirements for great crested newts)

There is great potential to increase the range and size of great crested newt populations through, for example:

- Increase in extent of suitable terrestrial habitat
- Creation and restoration of ponds and pond complexes
- Wildlife gardens in school ground and urban situations
- Enlarge existing areas of low to medium population density (repeat the Ouse Estuary Restoration Project in other locations)

Opportunities to carry out this type of work are included within:

- Sustainable drainage schemes
- Agri-environment schemes
- Currently the South Downs Environmentally Sensitive Areas Scheme and the Countryside Stewardship Scheme (both now closed to new entrants) offer payments towards the cost of pond creation and restoration.

Table 1: Pond creation and restoration in Sussex under Defra schemes 1993-2003.

Year	Pond creation East Sussex	Pond creation West Sussex	Pond restoration East Sussex	Pond restoration West Sussex
1993	3	0	3	1
1994	1	1	6	2
1995	3	0	5	0
1996	5	2	6	1
1997	7	0	27	0
1998	19	5	22	7
1999	11	2	21	1
2000	16	2	23	13
2001	15	12	49	13
2002	24	20	51	38
2003	69	14	45	29
Total	173	58	258	105

As a result of the Agri-Environment Review, the government is launching **Environmental Stewardship (ES)** in 2005. This new agri-environment scheme will comprise an Entry Level Stewardship (ELS) and a Higher Level Stewardship (HLS). The Higher Level Stewardship will be based on and replace the existing Countryside Stewardship Scheme (CSS) and Environmentally Sensitive Areas Scheme (ESA).

The Higher Level Stewardship will concentrate on the more complex types of management needed to achieve these objectives, where land managers need advice and support, where agreements need to be tailored to local circumstances and where management needs to be carefully targeted. The Entry Level Stewardship will take a simple approach to supporting the good stewardship of the countryside and be open to all on a non-competitive basis. It will not include capital payments.

The exact prescriptions of ES are still being decided. For up to date information please visit the Defra website: www.defra.gov.uk/erdp/reviews/agrienv

8. Action Plan

This Species Action Plan has now been archived

9. Monitoring / Review

The Sussex Biodiversity Partnership will undertake the monitoring and review of this Species Action Plan at 5 yearly intervals. This will include monitoring the fulfilment of actions carried out against the targets set.

10. References

- Banks B 1991 'Identification: British Newts', British Wildlife, Vol. 2, No6, pp 362-365
Barker M & Elliott M (2000) *SARG Millennium Report "A Great Leap Forward"*
Cooke A S 1994 'Fluctuations in night counts of great crested newts at eight breeding sites in Huntingdonshire 1986-1993' in Gent T & Bray R (eds), *Conservation and management of great crested newts: Proceedings of a symposium held on 11 January 1994 at Kew gardens, Richmond, Surrey*. English Nature, Peterborough.

Doherty E D 1997 *Developing Best Practice Guidance for the Treatment of Great Crested Newts in Environmental Impact Assessment*, University of Brighton, Sussex.
English Nature *Great Crested Newt Mitigation Guidelines*:
English Nature 1994 *Facts about great crested newts*, English Nature, Peterborough
English Nature 1996 *Great Crested Newts: Guidelines for Developers*. English Nature, Peterborough
English Nature *Amphibians in your garden*:
English Nature *Great Crested Newts on your farm*:
www.english-nature.org.uk/about/teams/team_photo/GreatNewts.pdf
www.english-nature.org.uk/pubs/publication/PDF/amphibgard.pdf
www.english-nature.org.uk/pubs/publication/PDF/gcn0801w.pdf
Environment Agency (2003) *Development and Implementation of a Pilot Monitoring Programme for the Great Crested Newt Triturus cristatus*
Langton T, Beckett C & Foster J (2001) *Great Crested Newt Conservation Handbook*, Froglife
MacGregor H 1995 'Crested Newts - Ancient Survivors', *British Wildlife*, Vol 7, No 1, pp1-8
SNH (1997) Information and Advisory Note Number 92: *The ecology, conservation and management of the great crested newt (Triturus cristatus)*

UK Great Crested Newt SAP: www.ukbap.org.uk/asp/UKPlans.asp?UKListID=619
UK Biodiversity Action Plan: www.ukbap.org.uk
National Biodiversity Network: www.nbn.org.uk

II. Consultation

Brighton and Hove City Council: www.brighton-hove.gov.uk
British Trust for Conservation Volunteers: www.btcv.org/
Country Land and Business Association: www.cla.org.uk
Department for Environment Food and Rural Affairs: www.defra.gov.uk
East Sussex County Council: www.eastsussexcc.gov.uk
English Nature: www.english-nature.org.uk
Environment Agency: www.environment-agency.gov.uk
Farming and Wildlife Advisory Group: www.fwag.org.uk
Forestry Commission: www.forestry.gov.uk
Froglife: www.froglife.org/
High Weald AONB Unit - Weald Heathland & Weald Meadows Initiatives: www.highweald.org
National Farmers Union: www.nfu.org.uk
Pagham Harbour Nature Reserve: www.sussexwt.org.uk/reserves_pagham.htm
(Sussex Nature Web: www.sussexnatureweb.btinternet.co.uk/)
Romney Marsh Countryside Project: www.rmcp.co.uk/
Rother Valley Project: www.vic.org.uk/vic1-bin/f21.idc?number=128
Royal Society for the Protection of Birds: www.rspb.org.uk
South East Water: www.southeastwater.co.uk/
Southern Water Pond Warden Scheme:
www.southernwater.co.uk/Knowledge_Zone/Environment/Pond_warden_scheme/default.asp
Southern Water: www.southernwater.co.uk/
Sussex Amphibian and Reptile Group: www.uksafari.com/sarg/
Sussex Biodiversity Partnership: www.biodiversitysussex.org
Sussex Biodiversity Record Centre: www.sxbrc.org.uk
Sussex Downs Conservation Board: www.vic.org.uk
Sussex Ornithological Society: www.susos.org.uk
Sussex Otters and Rivers Partnership: www.southeastwater.co.uk/otters.asp
Sussex Wealden Greensand Heath Project: www.vic.org.uk

Sussex Wildlife Trust: www.sussexwt.org.uk
West Sussex County Council: www.westsussex.gov.uk
Wildfowl and Wetlands Trust: www.wwt.org.uk/

12. Appendices

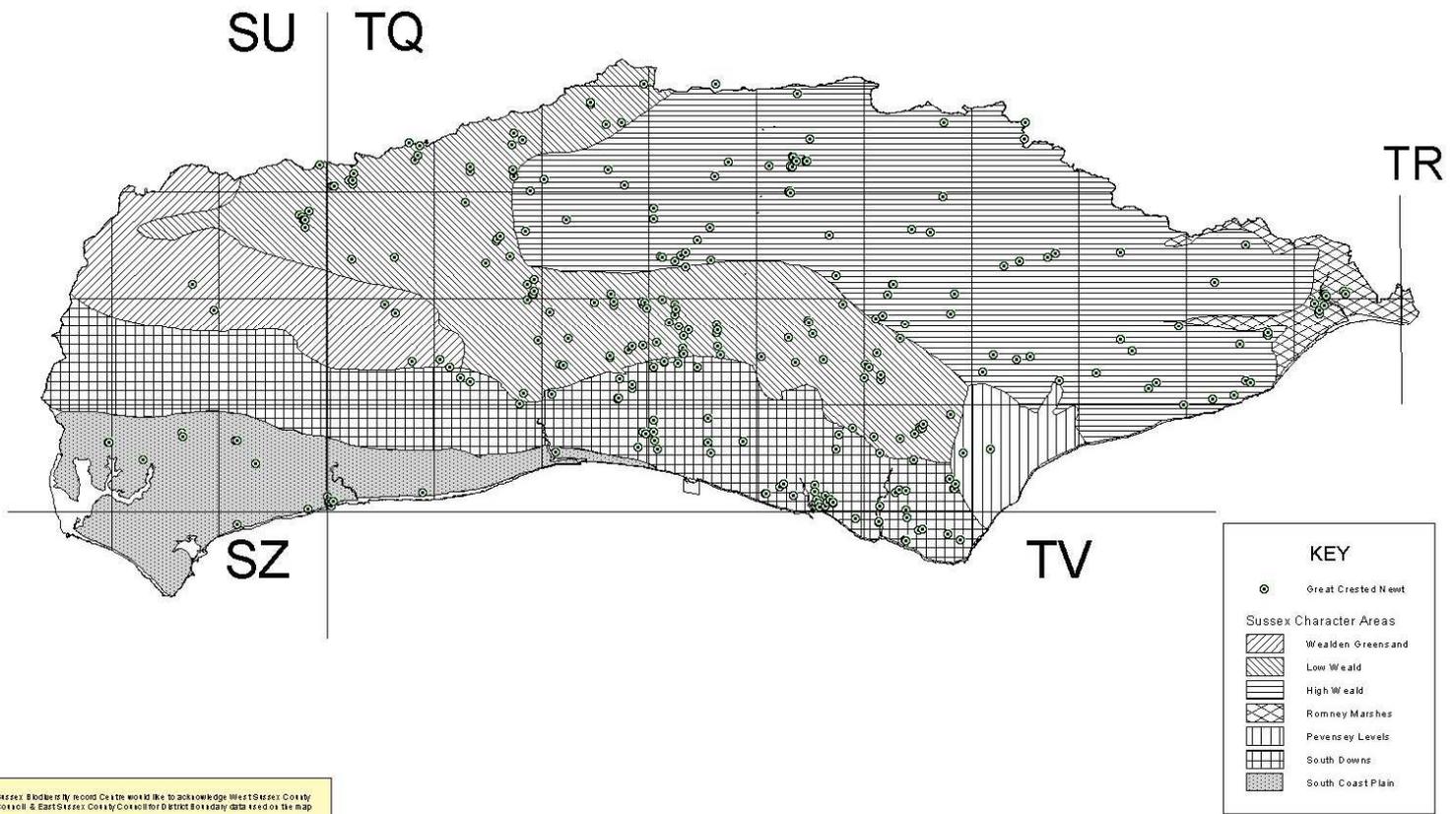
Appendix I: Contact details

Great Crested Newt National Species Action Plan Steering Group (GCN SAP SG):
Herpetological Conservation Trust (HCT) (Secretariat): www.herpconstrust.org.uk/
British Herpetological Society (BHS): www.number19.free-online.co.uk/society.html
Countryside Council for Wales (CCW): www.ccw.gov.uk/
English Nature (EN): www.english-nature.org.uk
Environment Agency (EA): www.environment-agency.gov.uk
Froglife: www.froglife.org/
Herpetofauna Groups of Britain and Ireland (HGBI): www.froglife.fsnet.co.uk/HGBI/HGBI.htm
PondLife Project: www.livjm.ac.uk/pondlife/
Scottish Environmental Protection Agency (SEPA): www.sepa.org.uk/
Scottish Natural Heritage (SNH): www.snh.org.uk/
The Joint Nature Conservation Committee (JNCC): www.jncc.gov.uk/
Wildlife Trusts: www.wildlifetrusts.org/

National Biodiversity Network: www.nbn.org.uk

Appendix 2: Map showing Great Crested Newt records in Sussex

Map showing Great Crested Newt records in Sussex
Produced by the Sussex Biodiversity Record Centre 24/11/04



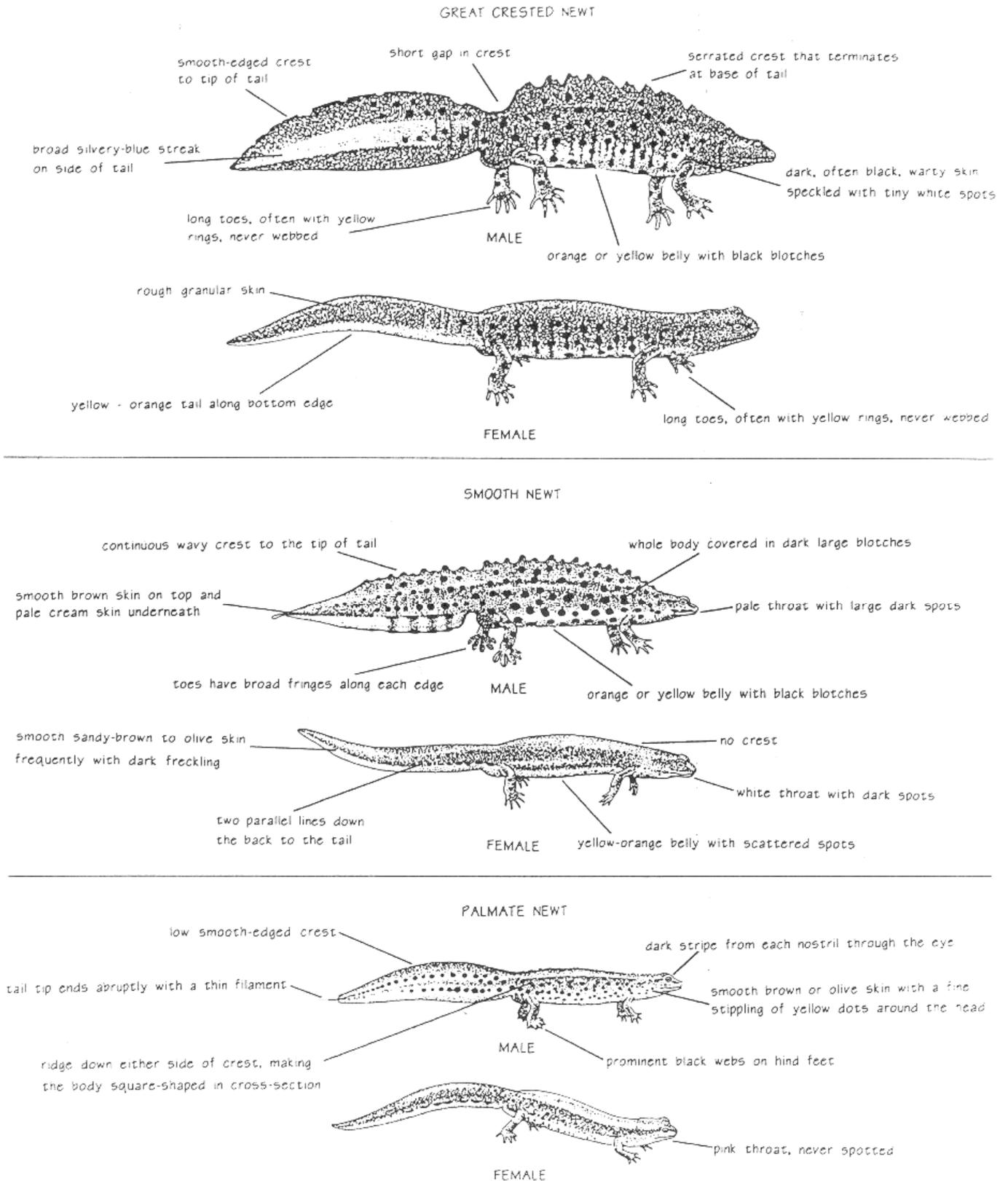
Appendix 3: Summary of Ideal Habitat Requirements for Great Crested Newts

IDEAL HABITAT REQUIREMENT	COMMENTS
Size: The pond should not be too large, ideally 10-20 m diameter with a surface area of 100 - 300 m ² .	To sustain a viable population of great crested newts.
Depth: The pond should have variable depth.	To encourage a maximum diversity of plants and animals in the pond.
Vegetation: The pond should contain a quantity of floating or submerged vegetation, with areas of open water.	To provide shelter, places to lay eggs and courtship areas.
Invertebrates: There should be a wide range of invertebrates in the pond.	To provide a plentiful food source.
Fish: The pond should be free of fish.	Fish are known to eat newt eggs and tadpoles.
Waterfowl: There should be no waterfowl present.	Waterfowl eat water weed, also food of great crested newts, and eat newt tadpoles.
Shade: Heavy shading from surrounding scrub and trees should be avoided.	If the water cannot warm up, this can affect the breeding performance of great crested newts.
Drying out: Should not happen every year, however if it dries out by late summer, it may be beneficial.	Great crested newts can survive occasional drying out of the pond and this can prevent predatory fish from becoming established.
Distance from other ponds: The pond should preferably be one of a cluster of ponds within 250 m of each other.	To encourage immigration and emigration to avoid inbreeding.
Location: Ponds should preferably not be located near to heavily used roads or footpaths and features such as culverts and drains.	As great crested newts may be killed or trapped and unable to escape.
Pollution and disturbance: There should be no agricultural or chemical pollution near the pond or high levels of human disturbance.	To avoid damage and disturbance to the pond and its inhabitants.
Use of herbicides and pesticides: There should be little or no herbicide or pesticide use.	In order to maintain insect and invertebrates necessary for food.
Area of terrestrial habitat: The area of land surrounding the pond, up to 500 m should be considered as possible great crested newt habitat.	Dispersion distance for young great crested newts and area of surrounding land used for shelter, feeding and hibernation..
Hibernation and shelter sites: Piles of rubble or rock, compost heaps, log piles and cracks in the ground should be provided.	To provide shelter and frost-free hibernation sites.
Surrounding habitat type: There should be some scrub and woodland nearby which should ideally contain a variety of vegetation with different management regimes, especially light grazed pasture.	To provide food, shelter and places to hibernate.
Management: Mown grass surrounding the pond should be kept fairly long.	To provide shelter.

Compiled from English Nature (1996), MacGregor (1995) and Cooke *et al* (1994).

Courtesy: Doherty 1997

Appendix 4: Identification of great crested, smooth and palmate newts



Text: Adapted from information in Banks 1991
 Drawings: Taken from English Nature 1994
 Courtesy: Doherty 1997

Appendix 5: The Newt Year

